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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,793

02/20/2004

Masahide Hirai

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08/24/2005

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EXAMINER

GRAINGER, QUANA MASHELL

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,793

Applicant(s)

HIRAI ET AL.

Examiner

Quana M. Grainger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,7,9,10 and 12 is/are rejected.
- 7) ☒ Claim(s) 4,5,8 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The content of the drawings are approved by the examiner.

Title

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 2-20-2004 and 4-29-2004 was considered by the examiner.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Taguchi (JP2003-215945a). The image forming apparatus by Taguchi comprises an image bearing member 11 for bearing a toner image; an image forming unit for forming a toner image on said image bearing member; an intermediate transfer member 31 to which the toner image is primarily transferred from said image bearing member, said intermediate transfer member rotating while being in contact with said image bearing member; an output unit for outputting information on a moving distance at a time when said intermediate transfer member 31 rotates; a conveying unit which, in an attempt to secondarily transfer the toner image on the intermediate transfer member 31 to a predetermined position on a recording material, starts conveyance of the recording material at a predetermined timing; a calculation unit for calculating the predetermined timing on a basis of the information on the moving distance which is output by said output unit at a time when a rotation speed of the intermediate transfer member is switched from a first speed to a second speed lower than the first speed; a storage unit for storing information on the predetermined timing calculated by said calculation unit; and a control unit for controlling a rotation of an intermediate transfer member and a conveyance of a recording material by said conveying unit, wherein, in a case in which a rotation speed of said intermediate transfer member 31 is switched from the first speed to the second speed lower than the first speed to secondarily transfer the toner image on said intermediate transfer member to the predetermined position on the recording material, said control unit controls said conveying unit to start the conveyance of the recording material at the predetermined timing stored in said storage unit (abstract: figure 5). The calculation unit calculates the predetermined timing in a preparation operation which is executed before said image forming unit forms an image on said image bearing member.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 3, 6-7, 9-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi in view of Yoneda et al.

Taguchi does not a drive motor number detection unit.

Yoneda et al. teaches a drive motor number detection unit. The drive motor for rotating an intermediate transfer member; and a motor rotation number detection unit for detecting a number of rotations of said drive motor, wherein said output unit outputs the information on the moving distance on a basis of the number of rotations of said drive motor detected by said motor rotation number detection unit (abstract).

Taguchi in view of Yoneda et al. suggests an image forming apparatus, comprising: an image bearing member for bearing a toner image; an image forming unit for forming a toner

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image on the image bearing member; an intermediate transfer member to which the toner image is primarily transferred from the image bearing member, the intermediate transfer member rotating while being in contact with the image bearing member; an output unit for outputting pulse signals in a number corresponding to a moving distance at the time when the intermediate transfer member rotates; a conveying unit, in an attempt to secondarily transfer the toner image on the intermediate transfer member to a predetermined position on a recording material, for starting conveyance of the recording material; and a control unit for controlling the rotation of the intermediate transfer member and the conveyance of the recording material by the conveying unit, wherein, in the case in which the rotation speed of the intermediate transfer member is switched from the first speed to the second speed lower than the first speed to secondarily transfer the toner image on the intermediate transfer member to a predetermined position on the recording material, the control unit controls the conveying unit to start the conveyance of the recording material as the number of pulses output by the output unit after the switching from the first speed to the second speed is started, has reached a predetermined number of pulses. The image forming apparatus further comprising: a drive motor for rotating the intermediate transfer member; and a motor rotation number detection unit for detecting the number of rotations of the drive motor, wherein the pulse signals in the number corresponding to the moving distance, which are output by the output unit, are pulse signals in a number corresponding to the number of rotations of the drive motor which are detected by the motor rotation number detection unit.

Taguchi in view of Yoneda et al. further suggest an image forming apparatus, comprising: an image bearing member for bearing a toner image; an image forming unit for forming a toner image on the image bearing member; an intermediate transfer member to which the toner image

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is primarily transferred from the image bearing member, the intermediate transfer member rotating while being in contact with the image bearing member; an output unit for outputting pulse signals in a number corresponding to a moving distance at the time when the intermediate transfer member rotates; a conveying unit, in an attempt to secondarily transfer the toner image on the intermediate transfer member to a predetermined position on a recording material, for starting conveyance of the recording material; and a control unit for controlling the rotation of the intermediate transfer member and the conveyance of the recording material by the conveying unit, wherein, in the case in which the rotation speed of the intermediate transfer member is switched from the first speed to the second speed lower than the first speed to secondarily transfer the toner image on the intermediate transfer member to the predetermined position on the recording material, the control unit controls the conveying unit to start the conveyance of the recording material as the number of pulses output by the output unit after the formation of the toner image on the image bearing member in the image forming unit is started, has reached a predetermined number of pulses. The number of rotations of the drive motor, wherein the pulse signals in the number corresponding to the moving distance, which are output by the output unit, are pulse signals in a number corresponding to the number of rotations of the drive motor which are detected by the motor rotation number detection unit.

The examiner takes official notice that it is known in the art use image data from an external apparatus and to start the formation of the toner image based on the image data on the image bearing member in the image forming unit.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of use the teaching of Yoneda et al. with the image forming

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apparatus of Taguchi to reduce speed fluctuations of the image bearing member and the intermediate transfer member (Yoneda et al.; problem to be solved: lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a convention external apparatus as a source for image data as is known in the art.

Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sahara and Takeda et al. teach pertinent prior art. Matsumoto teaches the use of external image data with an image forming apparatus.

Allowable Subject Matter

11. Claims 4-5, 8, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

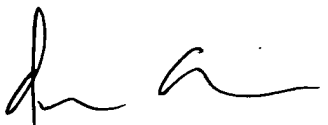
Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quana M. Grainger whose telephone number is 571-272-2135. The examiner can normally be reached on 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Quana M Grainger
Primary Examiner
Art Unit 2852

QG